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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 10/561,802

Filing Date: December 22, 2005

Appellant(s): WASHIO ET AL.

Neil S. Bartfeld, Ph.D.
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 05/16 and 05/27/09 appealing
from the Office action mailed 12/27/07.

(1) Real Party in Interest

A statement identifying Tokyo Ohka Kogyo C0., Ltd. by name of the real party in interest is contained in the brief.

(2) Related appeals and Interferences

A statement is on the record that there is no appeal, proceeding or interference in relating to the instant brief on appeal.

(3) Status of the claims

There are the statements to identify claims 1-4 being pending and appealing as appeared in Appendix of Appeal Brief.

(4) Status of Amendments

There is no amendment in response to the Office action mailed on 12/27/07.

(5) Summary of Claimed Subject Matter

The statement of the status of claims contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The statements of the grounds of rejections to be reviewed are correct.

(7) Claims Appendix

The copy of the appeal claims 1-4 is correct.

(8) Evidence Relied Upon

5,985,525	Sato et al	11-1999
6,900,003	Anzures et al	05-2005

(9) Grounds of Rejection

(A) Claims 1-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sato et al (5,985,525) considered in view of Anzures et al (6,900,003).

FACT: Sato et al disclose, teach and suggest a developer and its use. The composition comprising an organic quaternary ammonium base as claimed. Please see the whole disclosure of each of the applied references, especially in Sato et al at col.2:41-64 and 5:61 to 6:11. It is noted and understood that Sato et al do not cite a use of a metal ion salt (of a diphenyl oxide sulfonic containing group) in a developer being intended use to fabricate a perfect micro-conducting chip performance because a presence of a sufficient amount of a metal ion causes an ill effect and/or result in obtaining a subsequence process to obtain a perfect micro-conducting-chip performance.

Since the broadly claimed embodiments have not been limited to a developer for developing a micro-conducting chip having "...thick resist..." on page 5, line 23 and and/or with "...sufficient rising..." on page 6, line 14 of the instant application to overcome the problem of a presence of a sufficient amount of a metal ion in a micro-conducting chip developer, rational is made as followed:

RATIONAL: (1) Since the broadly claimed embodiments have not been limited to a developer for developing a micro-conducting chip having "...thick resist..." on page 5, line 23 and and/or with "...sufficient rising..." requirement(s) on page 6, line 14 of the instant application, an ill result or performance of a micro-conducting chip is occurred when a presence of a sufficient amount of a metal ion in a developer as recognized on page 5, line 14-23 of the specification, it would have been obvious to one having ordinary skill in the art at the time the invention was made to accept an ill result or performance with a use of a sufficient amount of a metal ion as disclosed and taught in Sato et al and as recognized by applicant on page 5, line 14-23.

(2) Since there is no amount of a metal ion in the broadly claimed embodiments, at the level of one skilled in the art and/or an

average skill artisan at the time the invention was made, a tiny amount, such as (1 part of a metal ion)/(1 x10¹⁰⁰) parts of a solution would not cause a recognizable ill result or performance of a micro-conducting chip. There is no evidence to the contrary on the record. Although, Sato et al do not disclose, teach and/or suggest a tiny amount of a metal ion in a developer, one having ordinary skill in the art at the time the invention was made would allow a tiny amount of a metal ion in a developer in the absence of evidence to the contrary.

(3) It is allowed by law to broadly consider the broadly claimed embodiments with respect "developer composition for resist..." to broadly include a developer for developing a soft portions of an exposed commercial news paper printing plate, commercial radio, television and/or computer circuit board resist which generally have a many times in higher resist thickness than that of a micro-conducting chip and do not require sequential ion implantation(s) as that in a micro-conducting chip. In view of the broadly claimed embodiments, one having ordinary skill in the art at the time the invention was made would make and use the broadly claimed (less restricted

with "comprising" in the instant claims) developer with an allowance presence of a tiny amount of a metal ion for use with to develop a soft portions of an exposed commercial news paper printing plate, commercial radio, television and/or computer circuit board resist which generally have a many times in higher resist thickness than that of a micro-conducting chip and do not require sequential ion implantation(s) as that in a micro-conducting chip in the photoresist art from the teachings and/or suggestions in the above applied references.

(4) For a use of a metal ion salt of a diphenyl oxide sulfonic acid containing group being not disclose in Sato et al, it is known in the art to use a metal ion salt of a diphenyl oxide sulfonic acid containing group for the advantage of reducing residue in a developing solution and/or on a developing substrate (col.5:53-59). Evidence, can be seen in at least Anzures et al at col. 5:66 to 6:29.

(5) Since the above applied references are generally related to developers, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use, include or cited an alkali metal salt of a diphenyl oxide

sulfonic containing group for reasonable expectation of obtaining the advantage of reducing residue in a developing solution and/or on a developing substrate as disclosed, taught and suggested in Anzures et al. In view of the broadly claimed embodiments, one having ordinary skill in the art at the time the invention was made would make and use the broadly claimed (less restricted with "comprising" in the instant claims) developer with an allowance presence of a tiny amount of a metal ion for use with to develop a soft portions of an exposed commercial news paper printing plate, commercial radio, television and/or computer circuit board resist which generally have a many times in higher resist thickness than that of a micro-conducting chip and do not require sequential ion implantation(s) as that in a micro-conducting chip in the photoresist art from the teachings and/or suggestions in the above applied references.

(B) Claims 1-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Anzures et al (6,900,003) considered in view of Sato et al (5,985,525).

FACT: Anzures et al disclose, teach and suggest a developer and its use. The composition comprising a metal ion salt of a diphenyl oxide sulfonic acid containing group as claimed. Please see the whole disclosure of each of the applied references, especially in Anzures et al at col. 5:66 to 6:29.

RATIONAL: Anzures et al do not cite an organic quaternary ammonium base. However, it is known in the art to use an organic quaternary ammonium base to obtain an alkaline solution to remove a soft portion of a layer in the art. Evidence, can be seen in at least Sato et al at col. 2:41-64. Sato et al also disclose, teach and suggest a method of using the composition at least at col. 5:61 to 6:11. No ammonium salt of alkyl diphenyl ether sulfonic acid is suggested from the applied secondary reference with respect to Sato et al.

Since the above applied references are generally related to developers, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use, include or cite an organic quaternary ammonium for reasonable expectation of obtaining an alkaline solution to remove a soft portion of a layer as disclosed, taught and suggested in Sato et al.

(10) Response to Argument

Appellant's arguments filed 05/16/08 have been fully considered but they are not persuasive.

(A) Response to applicant's argument with respect to the rejection applying Sato et al considered in view of Anzures et al.

(I) Applicant recognizes an ill result or performance on page 5, lines 16-23 as that in Sato et al (Tanaka et al 5,543,268 and 6,329,126 cumulative prior art being not applied in anyone of the above rejection). A developer contains a metal ion salt (of a diphenyl oxide sulfonic containing group) in a developer being intended to fabricate a perfect micro-conducting chip performance because a presence of a sufficient amount of a metal ion causes an ill effect and/or result in obtaining a subsequence process to obtain a perfect micro-conducting-chip performance.

Since the broadly claimed embodiments have not been limited to a developer for developing a micro-conducting chip having "...thick resist..." on page 5, line 23 and and/or with "...sufficient rising..." on page 6, line 14 of the instant application to overcome the problem of a

presence of a sufficient amount of a metal ion in a micro-conducting chip developer, rational is made as followed:

RATIONAL: (1) Since the broadly claimed embodiments have not been limited to a developer for developing a micro-conducting chip having "...thick resist..." on page 5, line 23 and and/or with "...sufficient rising..." requirement(s) on page 6, line14 of the instant application, an ill result or performance of a micro-conducing chip is occurred when a presence of a sufficient amount of a metal ion in a developer as recognized on page 5, line14-23 of the specification, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use the metal ion as taught by Sato with the consequent loss of benefit.

(2) Since there is no amount of a metal ion in the broadly claimed embodiments, at the level of one skilled in the art and/or an average skill artisan at the time the invention was made, a tiny amount, such as (1 part of a metal ion)/(1 x10¹⁰⁰) parts of a solution would not cause a recognizable ill result or performance of a micro-conducing chip. There is no evidence to the contrary on the record. Although, Sato et al do not disclose, teach and/or suggest a tiny amount of a metal ion in a

developer, one having ordinary skill in the art at the time the invention was made would allow a tiny amount of a metal ion in a developer in the absence of evidence to the contrary.

(3) It is allowed by law to broadly consider the broadly claimed embodiments with respect "developer composition for resist..." to broadly include a developer for developing a soft portions of an exposed commercial news paper printing plate, commercial radio, television and/or computer circuit board resist which generally have a many times in higher resist thickness than that of a micro-conducting chip and do not require sequential ion implantation(s) as that in a micro-conducting chip. In view of the broadly claimed embodiments, one having ordinary skill in the art at the time the invention was made would make and use the broadly claimed (less restricted with "comprising" in the instant claims) developer with an allowance presence of a tiny amount of a metal ion for use with to develop a soft portions of an exposed commercial news paper printing plate, commercial radio, television and/or computer circuit board resist which generally have a many

times in higher resist thickness than that of a micro-conducting chip and do not require sequential ion implantation(s) as that in a micro-conducting chip in the photoresist art from the teachings and/or suggestions in the above applied references.

(4) For a use of a metal ion salt of a diphenyl oxide sulfonic acid containing group being not disclose in Sato et al, it is known in the art to use a metal ion salt of a diphenyl oxide sulfonic acid containing group for the advantage of reducing residue in a developing solution and/or on a developing substrate (col.5:53-59). Evidence, can be seen in at least Anzures et al at col. 5:66 to 6:29.

(5) Since the above applied references are generally related to developers, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use, include or cited an alkali metal salt of a diphenyl oxide sulfonic containing group for reasonable expectation of obtaining the advantage of reducing residue in a developing solution and/or on a developing substrate as disclosed, taught and suggested in Anzures et al. In view of the broadly claimed embodiments, one having ordinary skill in the art at the time the

invention was made would make and use the broadly claimed (less restricted with "comprising" in the instant claims) developer with an allowance presence of a tiny amount of a metal ion for use with to develop a soft portions of an exposed commercial news paper printing plate, commercial radio, television and/or computer circuit board resist which generally have a many times in higher resist thickness than that of a micro-conducting chip and do not require sequential ion implantation(s) as that in a micro-conducting chip in the photoresist art from the teachings and/or suggestions in the above applied references.

II. Applicant points out that the claimed developer is acceptable for use on resist having "...thick resist..." on page 5, line 23 and and/or with "...sufficient rising..." requirement(s) on page 6, line 14 of the instant application. However, the broadly claimed embodiments do not require anyone or such requirements as urged. In view of the broadly claimed embodiments, one having ordinary skill in the art at the time the invention was made would make and use the broadly claimed

(less restricted with "comprising" in the instant claims)
developer with an allowance presence of a tiny amount of a metal ion for use with to develop a soft portions of an exposed commercial news paper printing plate, commercial radio, television and/or computer circuit board resist which generally have a many times in higher resist thickness than that of a micro-conducting chip and do not require sequential ion implantation(s) as that in a micro-conducting chip in the photoresist art from the teachings and/or suggestions in the above applied references.

III. Applicant states on and forth record that the specification is limited to semiconductor only with no broaden embodiment being intended in the instant claims. Therefore, the instant claims are limited to semiconductor only with no broaden embodiment being intended in the instant claims. It is noted, considered and interpreted as (1) it is free, permitted and/or allowed for anyone to make the same or obviously same developer as broadly claimed so long as someone showing a reason for an intended use other than semiconductor, (2) none of the claimed embodiments should be considered and/or given any value other than specific

compounds and/or their adjacent homologue and the same or obviously about the same amount used in the specification and (3) it is free, permitted and allowed for making and using the same or obviously same claimed developer when someone reasonably provide an intended for use on any photoresist other than on a semiconductor. Although, when it is in doubt, the claimed embodiments are read in light of the specification. This is not the case, the claimed embodiment(s) are broader than those in the specification.

IV. In view of the broadly claimed embodiments, there is reasonable for combining the teachings and/or suggestions of the applied references as clearly pointed out and set forth above.

(B) Response to applicant's argument with respect to the rejection applying Anzures et al considered in view of Sato et al.

Applicant recognizes that Anzures et al developer containing an amount of a metal ion salt (of a diphenyl oxide sulfonic containing group) as a residue reducing agent as that in the instant claims. Evidence can be seen in Anzures et al on at least col.4:26-27, 5:53 to 6:56, 7:16-17. Applicants also recognize that Sato et al disclose, teach and suggest the use of an amount of an organic quaternary ammonium base to provide an alkaline solution in order to remove or wash out as

soft resist portion. However, applicant argues that a presence of a sufficient amount of a metal ion a developer cause an ill result. Applicant prefers a sufficient resist thickness and/or with a subsequently sufficient rinse step (instant application on page 5, lines 23 to 6:1 and 12 to 16). However, the broadly claimed embodiment(s) have not been limited to a developer for a micro-conducting chip having a sufficiently high thickness than each of those in commercial micro-conducting chip and/or with a subsequently sufficient rinse step as narrowly urged.

C. Response to showings in Examples 4, 9 and 10 with Comparative Example 10.

(1) The showings have no value with respect to the rejection with the applied Anzures et al considered in view of Sato et al since Anzures et al developer contain an amount of a metal ion salt (of a diphenyl oxide sulfonic containing group) as a residue reducing agent as that in the instant claims. Evidence can be seen in Anzures et al on at least col.4:26-27, 5:53 to 6:56, 7:16-17.

(2) Applicant recognizes that showings have little value as compared to the broadly claimed embodiments as clearly pointed out and set forth on the record.

(3) The instant claims are not reasonably read the use of about 2.38 % by mass of tetramethylammonium hydroxide as tested.

(4) The instant claims are not reasonably read the use of about 3000 ppm of disodium ion salts of a diphenyl oxide disulfonic containing group) as tested.

(5) In view of the broadly claimed embodiments, it would like to see a result using about 2 ppm of an organic quaternary base and about 1 ppm of monosodium ion salt of a diphenyl oxide monosulfonic containing group as broadly claimed and considered as compared to that using about 2 ppm of an organic quaternary base and about 1 ppm of monoammonium ion salt of a diphenyl oxide monosulfonic containing group. At the level of one skilled in the art and/or an average skill artisan would recognize that no patentably distinct rate of dissolution as relied on for a patentability of the broadly claimed embodiment,

(5) Since applicant relies on the results of Examples 4, 9 and 10 for the patentability of the claims. It is reasonable to read the claimed embodiments as about narrow as showings with respect to chemical ingredients, their adjacent homologue, their amount and obvious amount to obtain the same and obviously the same results as relied on for the patentability of the claims.

(6) An allowed claim or patent would have no value when someone reasonably shows that at least one of the broadly claimed embodiments does not provide the same or about the same results, such as a use of about 1 ppm of

monosodium ion salt of a diphenyl oxide monosulfonic containing group as broadly claimed and considered, clearly pointed out and set forth on the record.

For one or more of the above reasons, the showings are incomplete, not commensurate in scope with the broadly claimed embodiment.

(11) Related Proceeding Appendix

For the above reasons, it is believed that the rejections are sound, proper and should be sustained.

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

Respectively submitted,

/Hoa V. Le/

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